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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,148	09/09/2003	Hideo Kato	15682-003001	5423

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EXAMINER

MARTIN, ANGELA J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,148

Applicant(s)

KATO ET AL.

Examiner

Angela J. Martin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/9/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 14 and 15 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected method for controlling a fuel cell stack assembly, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 8/25/06.
2. Applicant's election with traverse of claims 1-13 in the reply filed on 8/25/06 is acknowledged. The traversal is on the ground(s) that "search and examination of all claims...can be made without serious burden". This is not found persuasive because the apparatus can be used to practice another process, and thus, the inventions are distinct.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

3. Claims 1-13 are objected to because of the following informalities: It has been held that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by

Parr et al., U.S., Pat. No. 6,887,606 B2.

Rejection of claims 1-4, 9-12 drawn to a control apparatus.

Parr et al., teach a control apparatus for a fuel cell stack comprising a fuel cell stack (abstract) with end plates (col. 4, lines 56-63); electrical heaters near ends (col. 9, lines 1-10); water purging device (Fig. 15A, 15B; col. 9, lines 16-27); and a control unit that controls power generation of the stack and which is connected to heaters and water purging device (abstract). It teaches the purging device comprises a compressor and a purging valve (col. 9, lines 16-27). It teaches temperature sensors attached to fuel cell unit (col. 8, lines 46-67).

Thus, the claims are anticipated.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 5-8, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Parr et al., U.S., Pat. No. 6,887,606 B2, in view of Hayashi et al., EP 1283558 A2.

Parr et al., teach a control apparatus as described above.

Hayashi et al., teach electrical heaters disposed between end plates or terminal plates (abstract; col. 8, lines 2-9).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert the teachings of Hayashi et al., into the teachings of Parr et al., because "one end surface of each of the outermost fuel cells (end cells) in the stacking direction is exposed to the external air, and thus, the end cells are likely to be cooled by the external air. If the temperature of the end cells is lowered significantly, the power generating performance of the end cells is lowered." Thus, by incorporating the end heaters of Hayashi et al., into Parr et al, "the temperature drop of the fuel cells is effectively prevented." (Hayashi et al., 0004-0010).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wheat et al., U.S. Pat. 6,727,013 B2 teach a fuel cell system for cold environments. Lillis et al., U.S. Pat. 7,020,562 B2, teach a method of monitoring operation of gas sensor and system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela J. Martin whose telephone number is 571-272-1288. The examiner can normally be reached on Monday-Friday from 9:00 am to 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


AJM